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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,593	02/21/2001	Masatoshi Suzuki	203491US2S	8768

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EXAMINER	
NG, CHRISTINE Y	

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/788,593	SUZUKI, MASATOSHI	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,7 and 8* is/are rejected.

7)☒ Claim(s) *3,6 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 4, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,616,350 to de Boer et al in view of U.S. Patent No. 5,793,746 to Gerstel et al.

Referring to claims 1 and 4, de Boer et al disclose in Figure 1 an information transmission network system comprising:

A plurality of node units (Nodes 104-114) each accommodating at least one lower-tier terminal (CPEs 100, 118). Refer to Column 4, lines 21-27.

Service transmission lines (Bold lines) and protection transmission lines (Dashed lines) interconnecting said node units (Nodes 104-114).

Wherein said node units (Nodes 104-114) comprise (Figure 3):

A normal operating means (Ports A, B, D and E) for transmitting information in the main traffic by setting a main traffic communication path in said service transmission lines (Bold lines). Ports A, B, D and E correspond to working transmission lines. Refer to Column 8, line 66 to Column 9, line 5.

A failure detection means (Control unit 300) for detecting failure in said service transmission lines (Bold lines). Control unit 300 "is responsible for

standard error/failure monitoring of the working transmission lines" (Column 10, lines 16-18).

A backup operating means (Ports C and F) for inserting a predetermined signal (error signal), when a failure has been detected by said detection means (Control unit 300), at every exit to lower-tier terminals (CPEs 100, 118) substantially connected to said protection transmission lines (Dashed lines) and then switches the main traffic communication path set in the failed service transmission lines (Bold lines) to said protection transmission lines (Dashed lines). In the event of an error, the control unit 300 invokes a protection switch event by sending an error signal to all CPEs of the system and then replacing the failed service line with the protection line. Refer to Column 9, lines 5-7; Column 10, lines 14-51; and Figure 5.

de Boer et al do not disclose that the normal operating means transmits information in the sub-traffic by setting a sub-traffic communication path, if necessary, in said protection transmission lines.

Gerstel et al disclose that under normal conditions when backup channels are not used for backing up other connections, "the backup channels can be used to carry other connections but of lower priority". Refer to Column 7, lines 41-51. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the normal operating means transmits information in the sub-traffic by setting a sub-traffic communication path, if necessary, in said protection transmission lines; the motivation being that

this increases the capacity of the system during normal operation, allowing the system to support more connections and carry more information.

Referring to claim 7, refer to the rejection of claims 1 and 4. The node unit (Nodes 104-114) also comprises (Figure 3):

A transmitted information exchange unit (Ports A-F) that transmits and receives information through a predetermined communication path selectively between said service transmission lines (Bold lines) and protection transmission lines (Dashed lines). Refer to the rejection of claims 1 and 4.

At least one interface unit (OC-12 node 102,116) for said lower-tier terminals (CPEs 100, 118) that is each mounted in said at least one lower-tier terminal (CPEs 100, 118) and transmits and receives information between the corresponding lower-tier terminals (CPEs 100, 118) and said transmitted information exchange unit (Ports A-F). Refer to Column 6, line 51 to Column 7, line 2 and the rejection of claims 1 and 4.

A control unit (Control Unit 300) that monitors said service transmission lines (Bold lines) and protection transmission lines (Dashed lines) for failure, and, upon the detection of failure in said service transmission lines (Bold lines), terminates the communication path substantially connected to said protection transmission lines (Bold lines) by making said interface unit (OC-12 node 102,116) for lower-tier terminals (CPEs 100 and 118) send predetermined signals (error signals) to lower-tier terminals (CPEs 100 and 118) and then makes said transmitted information exchange unit (Ports A-F) switch the main

traffic communication path to the protection transmission lines (Dashed lines). Refer to the rejection of claims 1 and 4.

Referring to claim 2, de Boer et al do not disclose that the backup operating means in said node units inserts a first predetermined signal at the exit to lower-tier terminals where said sub-traffic communication path is set and inserts a second predetermined signal, which is different from said first predetermined signal, at the exit to lower-tier terminals where no sub-traffic communication path is set.

Gerstel et al disclose that "the usage of backup channels is controlled by local flags at each node". Each node unit inserts a first predetermined signal (FreeChan[B(i)] = True) when the backup channel is currently being used and inserts a second predetermined signal (FreeChan[B(i)] = False) when the backup channel is not being used. Refer to Column 7, lines 5-16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the backup operating means in said node units inserts a first predetermined signal where said sub-traffic communication path is set and inserts a second predetermined signal where no sub-traffic communication path is set; the motivation being so that the system can determine whether or not a backup channel is available for use, thereby preventing data collisions.

Referring to claims 5 and 8, refer to the rejection of claim 2. de Boer et al do not disclose the additional step of checking the protection transmission lines corresponding to the service transmission lines where a failure has been detected for any sub-traffic communication path.

Gertstel et al discloses that if a channel i fails, the usage of its corresponding "backup channel B(i) is determined by sensing B(i) to see if it is currently used" and "B(i) will be used for backing up a connection only if the node that discovers the failure does not sense that B(i) is currently active". Refer to Column 6, line 59 to Column 7, line 4. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the step of checking the protection transmission lines corresponding to the service transmission lines where a failure has been detected for any sub-traffic communication path; the motivation being to ensure that a failed channel's corresponding backup channel is available for use, thereby preventing data collisions when two channels sharing the same backup channels fail.

Allowable Subject Matter

3. Claims 3, 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The

fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng
August 4, 2004

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